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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,082

07/06/2006

Shugo Nishi

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.

1940 DUKE STREET

ALEXANDRIA, VA 22314

EXAMINER

LE, HOA T

ART UNIT

PAPER NUMBER

1773

NOTIFICATION DATE

DELIVERY MODE

09/24/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

Office Action Summary

Application No.

10/567,082

Applicant(s)

NISHI ET AL

Examiner

H. T. Le

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 5,6 and 10-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date May 2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Objections

1. Claims 5, 6 and 10-15 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 5, 6 and 10-15 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7-9 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Baking amorphous silica particles having an oil absorption of at least 340ml/100g is critical or essential to obtain the claimed amorphous silica, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). As disclosed in the instant specification, in particular, page 10, paragraph [0031], the oil absorption minimum requirement for forming the claimed amorphous silica is 340ml/100g. Thus, claims 7-9 which fail to include this essential limitation are not enabled by the disclosure.

3. Claims 7-9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for baking silica particles having an oil absorption of at least 340ml/100g at 200-990C and for 10 minutes to 5 hours, does not reasonably

Art Unit: 1773

provide enablement for a baking step under the same conditions with any other silica particles. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. As described in the instant specification, in particular, page 10, paragraph [0031], the particular baking temperature at such specific baking time as recited in claims 7-9 only applied to silica particles having a minimum oil absorption of 340ml/100g. Failing to include this oil absorption feature of the silica particles in the baking process in claims 7-9 renders these claims broader than the enabling disclosure.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 is indefinite because the claim describes a process without setting forth any steps involved in the process. "Silica particles are baked" is not a positive process limitation. A positive process limitation should read; for example "baking silica particles".

Claim 8 suffers the same deficiency of claim 7

Claim 9 is deemed indefinite in view of its dependency on claim 7.

Art Unit: 1773

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. **Claims 1-4 and 7-9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 10/566,373.** Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims and the referenced claims are directed to the same subject matter, namely amorphous silica of high oil absorption. The only difference between the instant claims and the referenced claims is the properties of the amorphous silica. It is necessarily inherent that the silica particles of the instant claims possess the same properties described in the referenced claims.

Art Unit: 1773

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1-4 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by the JP Patent No. 06-040714 ("JP'714").¹**

Claims 1-4: JP'714 teaches amorphous silica having oil absorption of at least 400ml/100g a pore peak radius of more than 15 nm. See paragraph [0008] and Table 1, first and second columns. The value of pore volume obtained by nitrogen adsorption method, $V_p(N_2)$ is 2.31 ml/g (see Table 1, columns 1 & 2) which is 2310 mm³/g. The pore peak diameter is 18.6 nm (Table 1, col. 1-2) which means that change in pore radius ΔR_p is less than 18.6 nm. Therefore, the maximum value of $\Delta V_p/\Delta \log R_p$ is (2310mm³/g/log18.6nm=) 1819 mm³/nm.g. The particle diameter is 15 to 50 microns. See paragraph [0020].

Claims 7-9: The silica is obtained by heating silica particles at 240C. See paragraph [0019].

¹ Copy provided by Applicant.

Art Unit: 1773

10. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuda et al (US 6,413,373).

Matsuda teaches silica particles having oil absorption of 350 to 500 ml/100g (col. 4, lines 27-33 and Tables 1 & 2). The silica has a pore volume (V_p) ranging from 1.0 to 2.0 cc/g for a pore diameter, R_p , of 200 to 2000 Å (see col. 4, lines 13-16 and claim 6), which is equivalent to a ΔV_p of 1.0 cc/g or 1000 mm³/g for an R_p from 20 nm to 200 nm. Thus the maximum value of $\Delta V_p/\Delta \log R_p$ is $[1000 \text{ mm}^3/\text{g}/(\log 200 \text{ nm} - \log 20 \text{ nm})] = 1000 \text{ mm}^3/\text{nm.g}$. Accordingly, the peak pore radius at maximum $\Delta V_p/\Delta \log R_p$ is 200 nm. The particle diameter is 5 to 30 microns. See col. 4, lines 44-46.

11. Claims 1-4 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by WO01/17901 ("WO'901").²

Claims 1-3: The V_p of pore diameter, R_p , from 10 to 20 Å (or 1-2 nm) is from 0.013 to 0.364 cc/g (see Table 1, fourth column), which is equivalent to 364 m³/g. Thus the maximum value of $\Delta V_p/\Delta \log R_p$ is $[364 \text{ m}^3/\text{g}/(\log 1) = 364 \text{ mm}^3/\text{nm.g}]$. The maximum pore diameter is 18 nm (see Table 1, col. 6).

Claims 7-9: WO'901 teaches a method of obtaining silica particles by heating silica up to 550°C for 10 hours. See Example 2.

12. Claims 1-4 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Pecoraro et al (US 6,107,236).

² Copy provided by Applicant.

Claims 7-9: Pecoraro teaches a method of obtaining silica particles by heating silica gel for one hour at 400C. See col. 9, lines 10-16.

Claims 1-4: Because the method of forming silica particles as taught by Pecoraro is same the claimed method, it is necessarily inherent that the resulting silica particles from Pecoraro's method exhibit the same oil absorption and pore parameters as claimed.

Drawings

13. The drawings are not of sufficient quality to permit examination because the details on the drawings are illegible. Accordingly, replacement drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to this Office action. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

Applicant is given a TWO MONTH time period to submit new drawings in compliance with 37 CFR 1.81. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a). Failure to timely submit replacement drawing sheets will result in ABANDONMENT of the application.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511.

The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

Art Unit: 1773

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. Thi Le/
H. (Holly) T. Le
Primary Examiner
Art Unit 1773

September 16, 2007